

# 360-DEGREE FEEDBACK WITH SYSTEMATIC COACHING: EMPIRICAL ANALYSIS SUGGESTS A WINNING COMBINATION

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*Wanted: High-performance work practices to gain a competitive advantage. An increasingly common answer to this desperate call is 360-degree programs; unfortunately, they have, at best, mixed reviews when empirically assessed. This study found that a way to improve the effectiveness of 360s may be to combine them with coaching focused on enhanced self-awareness and behavioral management. In a small manufacturer, this feedback-coaching resulted in improved manager and employee satisfaction, commitment, intentions to turnover, and at least indirectly, this firm's performance. This feedback-coaching may be a winning combination to help in the competitive battles in today's global economy. © 2004 Wiley Periodicals, Inc.*

## Introduction

As managerial jobs become more complex and multidimensional (London & Beatty, 1993; Varma, Beatty, Schneier, & Ulrich, 1999), organizations are increasingly implementing high-performance work practices such as 360-degree feedback interventions in hopes of improving workplace attitudes and performance (Atwater, Waldman, & Brett, 2002; London, 1997; London & Smither, 1995; Tornow & London, 1998). A very recent large survey found that about one in five firms currently use 360s (Armour, 2003). These programs are intended to provide managers with feedback from multiple sources such as supervisors, peers, subordinates, and themselves.

To date, the general consensus from research and practice has been that there are both benefits and potential problems associated with 360s, especially if used as an evaluation system rather than just as a personal development technique (Brett & Atwater, 2001). DeNisi and Griffin (2001) summarize the major advantages: (1) they provide ratees with information on how they are perceived by others; (2) they provide more information for improvement (by addressing weaknesses) than any other technique; and (3) ratings and feedback from different groups with special insights can be obtained. Conversely, the major problems associated with 360s have been identified: (1) they provide an overwhelming amount of information, making it difficult for the ratee to ef-

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fectively process all the information; (2) it is difficult to reconcile the differences between self-ratings and others' ratings; and (3) there is need for help and guidance (e.g., a coach) to figure out what to do with the conflicting information. In conclusion, DeNisi and Griffin (2001, p. 243) note that, "although these systems are becoming extremely popular, their effectiveness is still not known."

Although 360s are widely used by well-known organizations (e.g., DuPont, Boeing, Intel, Xerox, FedEx) for both personal development and evaluation, our study contributes to the growing body of knowledge on 360-degree feedback systems by specifically examining their impact when combined with systematic coaching on manager self-awareness and managers' and employees' attitudes and, at least indirectly, performance. We seek to address the recognized problems of 360s identified above.

The only other directly relevant empirically based study examining the role of coaching and 360-degree feedback is a very recently reported study that found that executives who worked with coaches (as opposed to those who didn't), based on their multisource feedback, set more specific goals, were more likely to share their feedback and solicit ideas from supervisors (but not peers or subordinates), and had improved performance ratings (Smither, London, Flautt, Vargas, & Kucine, 2003). Our study is different in that it is concerned with the impact of 360-degree feedback combined with coaching on the target managers' self-awareness and outcomes of the managers' and employees' attitudes and, indirectly, organizational performance. Specifically, we assess the effectiveness of the feedback-coaching in assisting managers in processing the great amount of information they are receiving from the 360s in order to help them reconcile and develop strategies to reduce the rating discrepancies between themselves and others and thus enhance self-awareness, and whether this self-awareness has an impact on their own and their employees' job satisfaction and organizational commitment.

### Background of the Study

The first step in the analysis of the impact of 360-degree feedback and coaching on self-

awareness is to determine the discrepancy between self-ratings and those of others. Most research to date has found a lack of agreement between self-ratings and those provided by others (Atwater, Ostroff, Yammarino, & Fleenor, 1998; Johnston & Ferstl, 1999). In addition, discrepancies are usually biased in the direction of self-ratings, i.e., self-evaluations are higher than those by other raters (e.g., Campbell & Lee, 1988; Yammarino & Atwater, 1997). This creates a discrepancy between one's self-evaluation and others' evaluations on various work and human resources dimensions (Atkins & Wood, 2002). If indeed there is incongruence between self-ratings and referent others' ratings, we propose that as one's self-awareness increases, the level of discrepancy between self-assessment and those provided by referent others (e.g., supervisors, peers, direct reports) will decrease. This is because managers who became self-aware of a discrepancy between their self-ratings and others' ratings could, through systematic coaching, eliminate the rating incongruency (Wohlers & London, 1989).

To date, most applications of 360 programs assume that simply providing the surface information to the target manager is sufficient to reduce any discrepancies, usually by lowering self-ratings. Importantly, by contrast, we suggest that the point of effective 360 programs should not be to decrease a manager's nonerroneous self-ratings (e.g., through negative self-doubt), but instead to increase the ratings of others over time through improved behavior and appropriate actions by the target manager. To accomplish this, we suggest proactive coaching to enhance the self-awareness of target managers. This is because, despite their good intentions, managers may not always have the skills and knowledge necessary to change their behaviors and actions (Maurer, Mitchell, & Barbeite, 2002). Thus, in this study, we designed a systematic coaching intervention (described in detail below) to increase managers' self-awareness. The intent was that by changing the managers' behavior and actions, the result would be a subsequent rating-discrepancy reduction.

In addition to enhancing the managers' self-awareness, we also propose that an important side effect of the coaching that accompanies the 360-degree feedback can be a positive impact on the attitudes of the managers and their employees (Church, 1997; Rogers, Rogers, & Meilay, 2002; Walker & Smither, 1999). In other words, achieving the reduced perceptual discrepancies is not an end in itself; just as important is the positive impact it can have on personal and employee outcomes (Hollenbeck, 1989; Phillips, Hollenbeck, & Ilgen, 1996). Thus, managerial behaviors and actions improved through the self-awareness coaching intervention should not only be recognized by others (discrepancy reduction), but should also result in improved attitudes of the target managers themselves—since they became aware of the facts, learned how to evaluate them, and developed effective behavioral responses—and better attitudes of their employees—since, due to the change in managerial behaviors and actions, they operate under more effective managers and thus have a favorable attitudinal reaction (Atwater, Waldman, Atwater, & Cartier, 2000; Atwater et al., 2002; Tsui & Ashford, 1994).

### The Field Study

To analyze the impact of self-awareness coaching used in conjunction with 360-degree feedback, we conducted a field study at a small manufacturing company located in the Midwest. Since 1953, this organization has been a manufacturer of quality tools, plastic injection molds, and precision-machined parts for the electronics, communications, and aerospace industries. To minimize threats to both internal validity (e.g., resentful demoralization, compensatory rivalry, diffusion of treatment, history, and local history effects) and external validity (e.g., generalizing to and across other units), the entire firm was used as the study site. The relatively small size of this firm made this approach possible.

### Study Participants

The study participants consisted of 20 managers (president/owner, vice president, plant

manager, controller, various functional/division heads and first-line supervisors) and 67 workers. Both managers and employees varied on their levels of skill, but, in general, were similar within and across their respective work units. On average, the managers were 45 years old, with 15 years of education and 14 years of company tenure. The employees were, on average, 35 years old, with 13 years of education and 8 years of company tenure. The study was conducted with the full support of management, including the owner of the company. The managers were told that the program would provide them with confidential 360-degree feedback on a number of managerial dimensions with follow-up coaching. The employees were informed that they were helping in the evaluation of a human resource management program.

### Measures

*The MFP scale.* For the 360-degree feedback, we developed a managerial feedback profile (MFP) based on (a) managerial activities research (Kotter, 1982; Luthans, 1988; Mintzberg, 1973; O'Reilly & Pfeffer, 2000), (b) Mann's (1965) classic dimensions of managerial performance, and (c) social cognitive theory (e.g., Bandura, 1986, 1997, 1999; Stajkovic, 2003). In particular, research based on observational studies of managerial work (Kotter, 1982; Luthans, 1988; Mintzberg, 1973) established several managerial functions (e.g., planning, controlling), and interpersonal activities such as communicating and getting input from and providing feedback to others. Using Mann's (1965) conceptualizations, research examining the ratings of managerial effectiveness (e.g., Mount, Judge, Scullen, Sytsma, & Hezlett, 1998) identified three competence categories: administrative, human relations, and technical. Finally, social cognitive theory elaborates on the managerial importance of self-regulatory mechanisms such as self-awareness (Bandura, 1999; Stajkovic, 2003; Wood & Bandura, 1989). From this theoretical background (see also O'Reilly & Pfeffer, 2000), we derived a personal responsibility dimension, defined as exhibiting control over current and future behaviors by taking

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accountability for one's actions, taking personal initiative, and being reliable and dependable.

Based on the above theory and research, we developed the MFP (see Appendix) intended to capture the three factors of managerial self-regulatory behavior. As shown in the Appendix, the factors are 1) behavioral competence (3 items), 2) interpersonal competence (3 items), and 3) personal responsibility (3 items). The response scale for each item ranged from 1, "never does this," to 9, "always does this," in addition to a "does not apply" option. Given that the MFP was a priori theoretically determined, we conducted second-order confirmatory factor analysis that did verify the three categories (Bollen, 1989; Kaplan, 2000).

**Attitudes.** Participants reported on their job satisfaction, organizational commitment, and turnover intentions using standardized measures with established psychometric properties. In particular, job satisfaction was measured using the job descriptive index (JDI) developed by Smith, Kendall, and Hulin (1969), which continues to demonstrate construct validity (Kinicki, Schriesheim, McKee-Ryan, & Carson, 2002). Four-item scales were used to measure the extent to which participants were satisfied with (a) work itself ( $\alpha = .79$ ), (b) supervision ( $\alpha = .80$ ), and (c) co-workers ( $\alpha = .79$ ). Organizational commitment was measured using the 15-item questionnaire (OCQ) ( $\alpha = .91$ ), developed by Mowday, Steers, and Porter (1979). Turnover intentions ( $\alpha = .71$ ) were assessed by three items adopted from Hom, Griffeth, and Sellaró (1984).

### *Study Procedures*

The study examined the impact that 360-degree feedback combined with coaching (described next) had on manager self-awareness (defined as the discrepancy between self-ratings and others' ratings) and self-attitudes and employees' attitudes. The MFP and attitude scales data were collected prior to (Time 1) and following (Time 2, 3 months later) the feedback coaching. Five to seven ratings were available for each manager

ratee: self ratings ( $n = 20$ ) and a composite referent "other" rating anonymously contributed by supervisors, peers, and direct reports. The self, supervisors, peers, and direct reports completed the same MFP scale, adjusted for referent language. This MFP and the attitude measures (satisfaction, commitment, and intention to quit) were administered during regular working hours to all managers ( $n = 20$ ) and others ( $n = 67$ ) in this firm.

### *The Systematic Coaching*

After the initial data collection (Time 1), the senior researcher met with each target manager individually in a coaching session using the feedback results of the MFP, systematically structured to enhance self-awareness by analyzing in detail the results of the rating discrepancies between the managers and others. These coaching sessions were completely confidential, and (by an agreement with the owner and all managers coached) were intended for developmental (as opposed to evaluative) purposes only. Since the results of the MFP were shared only with the manager in the coaching session, they were genuinely received. To minimize the actor/observer bias and to control for the process variance (Stajkovic & Luthans, 2001), the same coach met with all managers and systematically followed the exact same pattern in terms of structure and content.

The purpose of this coaching session was to establish the manager's self-awareness of the discrepancy between self- and referent other ratings on the MFP. In particular, the coach first presented to the managers the quantitative results of the MFP scale. In comparison to self-ratings, to maintain the promised strict confidentiality, all the referent others' ratings were presented as an aggregate average. Otherwise, if presented as separate ratings, the managers would likely know whom the supervisor or subordinates were, and that would violate the confidentiality agreement and the truthfulness of the feedback data. For each of the nine MFP items, self-score, others' score (including standard deviation), and a difference score

were presented to the manager. These scores were carefully explained by the coach, and the standard deviation of the others' score was also gone over to convey to the manager if there was fairly uniform or diverse agreement among others on each factor. Furthermore, a "spider" diagram showing "self" and "referent others" ratings plotted in different colors along the nine items scaled on the measure anchor values were provided to the participants. In other words, very thorough discrepancy analysis was confidentially done with each manager to go beyond typical surface feedback sessions to assure heightened self-awareness.

Whereas the major purpose of the coaching session was to make sure that the manager was aware of the rating discrepancy ("what has happened"), another goal was to have them gain awareness of what and why the results came out the way they did. Specifically, the target managers were asked about, and facilitated by the coach to reflect back and analyze, both their experiences and thought processes along the lines of the three MFP factors. Specifically, they were asked to (a) constructively address every item discrepancy (e.g., "Why do you think others feel that you are not providing enough feedback?"), and (b) verbalize an illustrative actual example for each item discrepancy ("I only provide emotional impressions instead of objective performance data"). Next, the discussion with the coach focused on the analysis of each item discrepancy and related example provided by the manager. The purpose here was to have each manager generate new knowledge about their work environment (why others reacted the way they did), and themselves (what could I have done differently). However, while providing meaning to past experiences, self-awareness does not necessarily translate new knowledge into future behavioral intentions (Bandura, 2001).

The last step in this systematic coaching was to help managers direct the knowledge gained from the increased self-awareness toward subsequent behaviors and actions by developing an answer to the following question: What can I do in the future with what I have learned about myself? Specifically, the coach first asked the manager (and facili-

tated him/her) to summarize the knowledge gained so far ("I now know that I need to draw relevant data from the quarterly reports in order to give more objective feedback"). Second, the manager was next asked to separate "facts from fiction." This part of the coaching was based on Seligman's (1993) research emphasizing the importance of understanding what can (e.g., managerial behavior) and what cannot (at least easily) be changed given the circumstances ("Production, but not profitability data, is available to me to share with others"). Third, building on this dialogue, the manager was then helped to select an appropriate course of action regarding each item discussed ("I must start providing feedback based on objective data"). Lastly, the manager was assisted in understanding the necessary antecedents (e.g., more learning, needed resources) and potential consequences of each course of action discussed (e.g., more workload, increased responsibility).

The last phase of the coaching session focused on the manager being aware of taking self-responsibility for improvement and how to do it (see Stajkovic, 2003). As Pfeffer (1995, 1998) has repeatedly noted, although many times managers know what they are supposed to do (e.g., provide timely and useful feedback), they may not know how to do it (application of behavior management principles). Thus, the fact that ineffective managerial practices result in poor attitudes and performance is "not related to instability in underlying principles of human behavior; more likely, it is caused by ... incomplete knowledge of basic social science ... [and] what we know about behavior" (Pfeffer, 1995, p. 60). As a result, although managerial actions are meant to improve employee behavior, they are often aimed at "the wrong behavior" (Lawler, 1990, p. 58).

To address this "how to" part of the systematic coaching, the managers were taught the key application principles of behavioral management (see Luthans & Kreitner, 1985; Luthans & Stajkovic, 1999). Managers were first instructed on how to clearly identify the behaviors critical to the task at hand (e.g., properly setting up the production run). They were next trained in obtaining the accurate

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data for the identified performance behaviors. The purpose here was to highlight the importance of getting objective measures of critical behaviors under existing conditions. Finally, managers were instructed in performing a functional analysis, which involved identifying the antecedents and the desirable consequences of the behavior(s) they first identified. Each coaching session then always ended on a positive, enthusiastic note.

#### *Follow-Up Checks*

To reinforce the systematic coaching session, and as a type of manipulation check, the researchers randomly conducted one-on-one follow-up visits with each of the participants until the end of the study. After briefly reviewing the manager's MFP results and the discussion from the coaching session, the researcher would probe the manager with questions as to whether this individual remembered and was implementing the coaching received on the job. This qualitative analysis revealed that the managers did remember and, importantly, were generally on track in successfully implementing the coaching received.

#### *The Method of Analysis*

We used a simple pre- and postdesign, but with no control group; we do not have a true experiment and thus this limits the conclusions that can be drawn. While the design allowed us to examine the change in job attitudes, organizational commitment, and turnover intentions after the feedback-coaching, the absence of a control group legitimately raises the question of attributing the results to alternative explanations other than the feedback-coaching itself. However, as Sackett and Mullen (1993, p. 614) point out, "In light of the very real constraints ... for many organizations, evaluation via formal experimental design is simply not feasible." In situations like this, Goldstein (1986, p. 144) suggests to "choose the most rigorous design possible and to be aware of its limitations." This is the approach taken here.

As in much previous research on training evaluations (e.g., Arvey, Cole, Hazucha, &

Hartanto, 1985; Sackett & Mullen, 1993), the constraint of not including a control group in our study was the population of only  $N = 87$  available in this organization. Sackett and Mullen (1993, p. 624) explicate this situation by noting that "... we see no ready mechanism for combating the low statistical power of the true experimental design in the setting where  $N$  is constrained. Thus, we suggest that there may be settings in which pre-experimental designs should be chosen over true experimental designs." For instance, had we split the sample size in two to create a control group, we would have ruled out the ambiguity regarding potential alternative explanations, but in terms of power, "the true experimental design [would have been] strikingly inadequate" (Sackett & Mullen, 1993, p. 624). This is because the power of the experiment would have gone down from .98 as present in this study (for  $N = 80$  [87 in our study]  $d = .5$ ,  $r_{xy} = .3$ ) to .59 (for  $n_e = 40$  and  $n_c = 40$  [43.5 in our study],  $d = .5$ ,  $r_{xy} = .3$ ), a 40% reduction in probability of correctly rejecting the null hypothesis when it is false (Arvey & Cole, 1989; Arvey et al., 1985; Cohen, 1988; Sackett & Mullen, 1993).

In summary, while we recognize that an experimental design would have been the preferred strategy, we also agree with Sackett and Mullen (1993, p. 621), who note, "When it is not possible we still advocate attempting an evaluation, even if all that is possible is a pre-experimental design. We argue that a pre-experimental design, paired with careful investigation into the plausibility of various threats, is still better than no evaluation at all." Thus, we next specifically examine the potential threats to the internal validity of our study.

#### *Threats to Internal Validity*

*History and local history.* The same general and internal local environment, with no noteworthy events, for all study participants likely prevented any biasing impact of history and local history effects. Given the design we used, we had an attentive eye on the history effect both in the planning stages of implementing the intervention and during the ac-

tual intervention. Since this was a relatively small organization, we had close knowledge of all aspects of this firm through numerous contacts, including the coaching sessions and follow-up manipulation checks with the managers. Specifically, this organization was (a) producing the same products, (b) had no union activity, (c) had the same equipment and technological processes, and (d) had no significant turnovers during the timeframe of this study. In addition, we further controlled for the local history effect by (a) having the coaching sessions relatively constant for all managers, (b) having the same person train all managers, and (c) conducting the study in the same local environment.

To double-check everything after the study was over, we again made several contacts with the company. We first discussed what we report above, and then we specifically asked them to (a) reassess if there were any other unusual external (history) or internal conditions (local history) that could have influenced the results and (b) double-check personnel and business records for any out-of-the-ordinary patterns of recorded activity within the company (e.g., union organizing activity, change in technology, downsizing or expansion) or in terms of the company's relations with its partners (e.g., suppliers, vendors, etc.). Again, no noteworthy events (internally or externally) were identified.

*Other threats.* Selection artifacts appear implausible since all managers and employees in this company participated in the study. Ambiguity about the direction of causal effects is ruled out since we only used feedback-coaching as a treatment. Instrumentation can be minimized since we used the same standardized attitude measures both pre- and posttest. While pretest measures can potentially sensitize participants to the posttest, enough time passed from pre- to posttesting that we feel confident exposure to the pretest did not influence posttest attitude or behavioral changes. We also designed our study to only include participants who were present during both baseline and intervention periods, thus preventing the mortality effect. Regarding maturation, all participants in our study had a relatively similar experience and were engaged in the same intervention

length, which is not long enough for any personality changes. To some extent, maturation was a desired effect since our goal was to increase self-awareness. Self-awareness is a natural process that occurs over time, and thus could be classified as a form of maturation that we hoped to see as new attitudes or behaviors become associated with the new environment after the feedback-coaching. Resentful demoralization, compensatory rivalry, and diffusion of treatment could also be ruled out since all the managers received the training under confidential conditions and no one was left out.

## Results of the Study

### *Self and Referent Other Rating Discrepancies*

Table I shows descriptive statistics and complete results of the between-group analysis for each MFP factor. In accordance with previous research on 360s, results at baseline (Time 1) revealed a significant difference between self (managers) and referent other ratings on all three factors of behavioral competency ( $t = 3.32, p < .01$ ), interpersonal competency ( $t = 6.60, p < .01$ ), and personal responsibility ( $t = 2.29, p < .05$ ). As expected, the manager's self-ratings were higher than the ratings given by others. Results after the feedback-coaching intervention (Time 2) showed no difference between self-ratings and other's ratings on all three factors of behavioral competency ( $t = .06, n.s.$ ), interpersonal competency ( $t = 1.26, n.s.$ ), and personal responsibility ( $t = .06, n.s.$ ). This finding supports that the feedback, combined with the systematic coaching, did indeed seem to enhance self-awareness of the managers in the study.

A within-group analysis over time, presented in Table II, shows that the self-ratings of managers remained statistically the same on all three factors of behavioral competency ( $t = -.73, n.s.$ ), interpersonal competency ( $t = -.32, n.s.$ ), and personal responsibility ( $t = 1.18, n.s.$ ). On the other hand, the ratings of others significantly increased on two of the three factors of behavioral competency ( $t = -3.79, p < .01$ ) and interpersonal compe-

*Selection artifacts appear implausible since all managers and employees in this company participated in the study.*

**TABLE I** Between-Group Analysis of the Rating Discrepancy Between Managers and Referent Others on Each Factor of the Managerial Feedback Profile (MFP)

	Factor 1 Behavioral Competence		Factor 2 Interpersonal Competence		Factor 3 Personal Responsibility	
	SR	RR	SR	RR	SR	RR
Time 1						
0	7.21	6.34	7.42	6.12	7.72	7.14
$\Phi$	.82	.84	.65	.60	.97	.55
$t^a$	3.32**		6.60**		2.29*	
Time 2						
0	7.35	7.33	7.49	7.24	7.40	7.38
$\Phi$	.61	.79	.71	.54	.72	.53
$t^a$	.06 n.s.		1.26 n.s.		.06 n.s.	

Note: The  $t$  values refer to the between-group comparisons between self-ratings of managers (SR) and referent ratings of others (RR) for both Time 1 and Time 2 of the experiment. For every factor at both T1 and T2,  $N$  for SR = 20. To ensure paired comparisons,  $N$  for RR was also 20 (combined) observations ( $df$  for each comparison = 38) in the analysis. However, the number of observations that went into each RR is larger, for it averages different ratings from supervisors, peers, and direct reports. In total, there were 20 superiors (one for each manager), 31 peers (1–2 for each manager; 0 = 1.7) and, 67 direct reports (2–4 for each manager; 0 = 2.4). Thus, the average  $N$  for RR = 102, with a range of  $N$  = 80 to  $N$  = 140 (per the breakdown of other observations reported in this note).

<sup>a</sup> Independent  $t$ -test.

\*  $p < .05$ . \*\*  $p < .01$

tency ( $t = -5.56$ ,  $p < .01$ ), and was in the right direction on personal responsibility ( $t = -1.72$ ,  $p = .051$ ). These results affirmed that the feedback-coaching did not seem to lead to discrepancy reduction by lowering the self-ratings through negative self-doubt; instead, the discrepancy was eliminated by positively raising the others' ratings of the managers.

#### *Self and Employee Attitudes*

Table III shows that for both the managers and their employees, work attitudes significantly improved following the feedback-coaching. In particular, for the managers' job satisfaction, there was a significant increase in satisfaction with work itself (6.10 to 10.25,  $t = -7.25$ ,  $p < .01$ ), supervision (5.25 to 9.75,  $t = -6.10$ ,  $p < .01$ ), and coworkers (5.70 to 10.55,  $t = -3.79$ ,  $p < .01$ ). Managers' organizational commitment also significantly increased (62.10 to 86.50,  $t = -12.44$ ,  $p < .01$ ), and their turnover intentions decreased significantly from baseline to postintervention period (11.70 to 5.75,  $t =$

6.62,  $p < .01$ ). Following the pattern of results for the managers, the employees' job satisfaction significantly increased, as shown by employee satisfaction with work (4.80 to 6.50,  $t = -4.02$ ,  $p < .01$ ), supervision (6.00 to 8.28,  $t = -5.37$ ,  $p < .01$ ) and co-workers (4.84 to 7.84,  $t = -6.12$ ,  $p < .01$ ). Employees' organizational commitment significantly increased (67.06 to 76.41,  $t = -4.70$ ,  $p < .01$ ), and turnover intentions significantly decreased (9.99 to 8.03,  $t = 3.81$ ,  $p < .01$ ). Thus, these results indicate that the 360-degree feedback combined with the systematic coaching did seem to have a positive impact on both the managers' and their employees' work attitudes.

#### **Discussion**

The purpose of this study was to empirically analyze in a field setting the effects that 360-degree feedback combined with systematic coaching had on target managers' self-awareness and attitudes and their employees' attitudes. By combining the systematic coaching with a 360-degree program, we hope to have



**TABLE II** Within-Group Analysis of the Rating Discrepancy Between Managers and Referent Others on Each Factor of the Managerial Feedback Profile (MFP)

	Factor 1 Behavioral Competence		Factor 2 Interpersonal Competence		Factor 3 Personal Responsibility	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Self-Ratings of Managers						
$\bar{0}$	7.21	7.35	7.42	7.49	7.72	7.40
$\Phi$	.82	.62	.65	.71	.98	.72
$t^a$	-.73 <i>n.s.</i>		-.32 <i>n.s.</i>		1.18 <i>n.s.</i>	
Referent Ratings of Others						
$\bar{0}$	6.33	7.33	6.12	7.24	7.14	7.39
$\Phi$	.84	.79	.60	.54	.55	.53
$t^a$	-3.79**		-5.56**		-1.72^	

Note: The *t* values refer to the within-group comparisons between self-ratings of managers from Time 1 to Time 2, and referent ratings of others from Time 1 to Time 2. For every factor at both Time 1 and Time 2, *N* for self-ratings of managers = 20. To ensure paired comparisons, *N* for referent ratings of others was also 20 (combined) observations (*df* for each comparison = 38) in the analysis. However, the number of observations that went into each referent rating of others is larger, for it averages different ratings from supervisors, peers, and direct reports. In total, there were 20 superiors (one for each manager), 31 peers (1–2 for each manager; *M* = 1.7) 67 direct reports (2–4 for each manager; *M* = 2.4). Thus, the average *N* for RR = 102, with a range of *N* = 80 to *N* = 140 (per the breakdown of other observations reported in this note).

<sup>a</sup> Dependent *t*-test. \*\* *p* < .01. \* *p* < .05. <sup>^</sup> *p* < .06 (this value was *p* = .051).

**TABLE III** Attitude Measures Before and After Feedback-Coaching for Both Managers and Employees

	<i>Job Satisfaction with Work</i>		<i>Job Satisfaction with Supervision</i>		<i>Job Satisfaction with Coworkers</i>		<i>Organizational Commitment</i>		<i>Turnover Intentions<sup>a</sup></i>	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Managers										
<i>M</i>	6.10	10.25	5.25	9.75	5.70	10.55	62.10	86.50	11.70	5.75
$\Phi$	2.07	1.58	1.33	3.35	.92	5.65	6.64	4.72	2.92	3.29
<i>t<sup>b</sup></i>	-7.25**		-6.10**		-3.79**		-12.44**		6.62**	
Employees										
<i>M</i>	4.80	6.50	6.00	8.28	4.84	7.84	67.06	76.41	9.99	8.03
$\Phi$	2.04	3.04	2.80	2.96	2.38	3.16	11.97	13.25	4.02	3.33
<i>t<sup>b</sup></i>	-4.02**		-5.37**		-6.12**		-4.70**		3.81**	

Note: The *t* values are for the Time 1 and Time 2 phases of the experiment for each variable. For every variable at both times *N* managers = 20 (*df* = 19), and *N* employees = 67 (*df* = 66). Time 1 = pre-intervention, Time 2 = postintervention.

<sup>a</sup> Lower scores indicate improvement; <sup>b</sup>Dependent *t*-test. \*\* *p* < .01.

initiated the change in focus from the question of whether 360-degree feedback is really applicable and useful to today's challenges facing organizations, to more specific research questions and application guidelines regarding the nature, structure, and impact

of 360-degree feedback on work attitudes, turnover, and, eventually, performance.

Increasingly, the real value of 360-degree feedback is being questioned (Armour, 2003; London, Smither, & Adsit, 1997; Waldman, Atwater, & Antonioni, 1998). However, by

*... showing that feedback-coaching had a positive effect on work attitudes and intentions to quit can help managers not only meet the challenge of improving 360-degree programs, but also reduce cost through decreased turnover and improved job satisfaction and organizational commitment that are related to performance.*

providing new initiatives such as combining it with systematic coaching, as used in this study, the positive benefits of a 360 program may yet be realized. Specifically, this study found that there seems to be much more involved in positively impacting managers by a 360 program than just providing simple feedback and expecting managers to change (see Kluger & DeNisi, 1996).

Two important lessons can be derived from the results of this study. First, for 360 programs to have a positive impact, the target managers may need systematic coaching along with the 360-degree feedback in order to gain self-awareness and have a positive impact on self- and others' work satisfaction, organizational commitment, and intention to turnover. As Bandura (1999, p. 154) states regarding the importance of linking cognitive processes such as self-awareness to action:

The recent years have witnessed the resurgence of interest in self-referent phenomena. Self processes have come to pervade diverse domains of psychology because most external influences [such as feedback—as defined by Kluger & DeNisi, 1996] affect human functioning through intermediary self processes rather than directly. The self system thus lies at the heart of causal processes.

Thus, we suggest that 360-degree feedback, combined with coaching aimed at enhancing self-awareness, may lead to improved self and employee attitudes and eventually even improved performance.

#### **Practical Implications for Performance Improvement**

Combining coaching with 360-degree programs may benefit today's cost-conscious human resource management in at least three ways. First, developing the coaching as used in this study may help overcome some of the problems associated with 360s such as processing the feedback information, dealing with the self and other discrepancies, and what to do with the information to become more effective (Antonioni, 1996; DeNisi & Griffin, 2001; Stajkovic, 2003; Waldman et al., 1998). Second, showing

that feedback-coaching had a positive effect on work attitudes and intentions to quit can help managers not only meet the challenge of improving 360-degree programs, but also reduce cost through decreased turnover and improved job satisfaction and organizational commitment that are related to performance. Mitchell, Holtom, Lee, Sablinski, & Erez (2001, p. 1102) recently noted that "intent to leave is the direct antecedent to turnover," and there is increasing evidence that job satisfaction (Judge, Thoresen, Bono, & Patton, 2001) and commitment (Meyer & Allen, 1997; Benkhoff, 1997) are related to performance.

Besides the possible indirect performance effects of satisfaction and commitment, the present study also provided more direct performance implications from feedback-coaching. Specifically, we found that archivally gathered organizational performance (i.e., sales revenue, unit-level production quality, and customer satisfaction ratings) significantly increased from right before the feedback-coaching (Time 1) to the three-month period following the feedback-coaching (Time 2). To control for a seasonality effect, we found that these overall performance outcomes had not improved during the same time period of the previous year. However, because individual level—performance measures were not available, these organizational level—performance measures were deemed to not be controlled enough to rule out alternative explanations. Although we did not include these very positive performance outcomes in our analysis, these findings do nevertheless lend at least initial support for the value that feedback-coaching may have, not only on work attitudes and turnover, but also on performance outcomes.

Another potentially interesting implication of our study would be the delivery of the feedback-systematic coaching to a greater number of managers in large organizations. Specifically, in this research study we did one-on-one coaching to assure attention to both numeric and, importantly, systemic content details; confidentiality; and favorable (no direct public exposure) reaction of managers in terms of accepting the entire program. However, the one-on-one mode of coaching delivery may put a strain on resources for big-

ger companies since they may have a large number of managers involved in a 360 program at one point in time—and not necessarily at the same place. With today's information technology, we suggest that the feedback-coaching as used in this study could be adapted for the Web or intranet and delivered online (see Cairncross, 2002 for method details). Briefly, the 360 data could first be confidentially collected through electronic survey techniques (see Simsek & Veiga, 2000), then analyzed (which could also be automatic), and, finally, the one-on-one coaching could even be delivered through electronic conferencing (e.g., Web cams, one-on-one chat rooms, net video calls).

### Limitations and Conclusion

Given that our field study did not employ a control group and thus was not a true experiment, the Hawthorne effect and/or demand characteristics may be raised as alternative explanations of the obtained results. However, we planned in advance several steps to minimize the potential for alternative explanations. In particular, we believe that the underlying perspective of the systematic coaching sessions was not conducive for a Hawthorne effect. First, managers knew that they were receiving the attention of the coach because they, on average, had a significant self-biased mismatch with what others thought about their management style. Thus, throughout, the coaching sessions encouraged the tone of "need for improvement and development" on the part of managers, rather than typical "lavished with attention" Hawthorne effect. Second, one may suggest that the information on self-biased mismatch may have itself resulted in managers changing their ratings to match those of others. However, our results show (see Table II) that the within-group self-rating of managers (from Time 1 to Time 2) did not change, whereas the rating of others increased for each MFP factor, suggesting an actual change in managers' behaviors and the resulting positive reaction of others to that change.

Regarding demand characteristics, the coaching was designed to clearly emphasize self-awareness, not personal attributes or

previous accomplishments of the managers. In fact, based on the researcher-coach's direct observations, managers frequently expressed interest to learn more and improve their behaviors and actions. While it is hard in any field study to get to the bottom of whether the intervention (instead of the expectation of change) was really behind the change (Eden & Aviram, 1993), we suggest that it would be difficult for the changes observed to be due entirely to demand characteristics, as changes were also found in the measured performance outcomes (e.g., revenues), which cannot happen just by thinking they might have (see Schwab, 1999).

Although we noted the recently reported Smith et al. (2003) study which indicated that executive coaching may enhance the value of multisource feedback, our study represents the first time that empirical analysis was conducted on combining coaching systematically based on social cognitive, self-awareness processes (Bandura, 1999, 2001; Stajkovic, 2003) and behavioral management (Luthans & Kreitner, 1985; Luthans & Stajkovic, 1999), with a 360 program. The positive impact of this feedback-coaching on job satisfaction, commitment, and turnover intentions is again gaining the center stage in theories of work motivation (Ambrose & Kulik, 1999) and high-performance work practices, but has, surprisingly, been neglected in multisource feedback research and application. As organizations are increasingly looking to human resources as their sustainable competitive advantage (Pfeffer, 1995, 1998), they are quickly realizing the benefits of satisfied and committed employees at all levels (Judge et al., 2001; O'Reilly & Pfeffer, 2000). We feel that the findings of this study may help take a small step toward the complex quest for gaining a competitive advantage through people.

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## APPENDIX

### *Managerial Feedback Profile (MFP)*

#### *Factor 1: Behavioral Competence*

Item 1: Determines appropriate solutions/resolutions for identified problems.

Item 2: Able to complete assigned duties and tasks.

Item 3: Achieves smooth workflow through effective coordination and scheduling of resources.

#### *Factor 2: Interpersonal Competence*

Item 4: Able to answer questions.

Item 5: Listens to concerns/ideas.

Item 6: Provides timely information and feedback.

#### *Factor 3: Personal Responsibility*

Item 7: Demonstrates accountability for actions and attitudes.

Item 8: Takes initiative in trying new ideas.

Item 9: Is reliable/dependable.

Note: Second-order confirmatory factor analysis (Bollen, 1989) found all path values and factor loadings represent completely standardized path coefficients. Also, model fit indexes obtained show good fit of the model to the data.